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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/196,574 11/20/98 CHALLAPALI

K PHA-23.540

TM02/0314

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EXAMINER

LEE, R

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 03/14/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

RE

Office Action Summary

Application No.
09/196,574

Applicant(s)
Challapali et al

Examiner
Richard Lee

Group Art Unit
2613



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-16 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-16 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2, 3

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. Claim 13 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n).

2. Claims 12 and 14-16 are objected to because of the following informalities:

(1) claim 12, line 4, after “encodes”, “the” should be changed to “an” for clarity;

(2) claim 14, line 5, “(I)” should be changed to “(i)” for consistency;

(3) claim 15, line 5, “(I)” should be changed to “(i)” for consistency;

(4) claim 15, line 5, “form” should be changed to “from” for clarity;

(5) claim 16, line 5, “(I)” should be changed to “(i)” for consistency; and

(6) claim 16, line 10, “(ii)” should be changed to “(iii)” for clarity.

Appropriate correction is required.

3. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At claim 16, line 15, after “foreground”, “pixel” should be properly inserted in order to provide proper antecedent basis for the same as specified at lines 10-11.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stenger of record (DE 3608489A1) in view of Katata et al (5,815,601).

Stenger et al discloses a method of improving image segmentation of a video telephone scene as shown in Figures 3 and 4, and substantially the same image processing device and system, method of encoding a stereo pair of images, computer executable process steps to process image data from a stereo pair of images, and apparatus for processing a stereo pair of images as claimed in claims 1-16, comprising substantially the same input which receives a stereo pair of images (see 10 of Figure 3 and 11, 12 of Figure 4); a foreground extractor (13-15 of Figure 4 and see page 4, lines 4-10 of translated article) coupled to the input which compares location of like pixel information in each image to determine which pixel information is foreground pixel information and which pixel information is background pixel information, wherein the foreground extractor computes the difference in location of like pixels in each image and selects the foreground pixels as those pixels whose difference in location falls above a threshold distance; wherein the stereo pair of images are received from a stereo pair of cameras spaced closely from one another in a video conference system (see Figure 3); the extracting includes identifying the location of like pixels in each of the stereo pair of images, calculating the difference between the

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locations of like pixels, and determining for each set of like pixels whether the difference between locations falls above a threshold difference, and if so identifying those pixels as foreground information (see page 4, lines 4-10 of translated article); a memory which stores process steps (i.e., as provided to carry out functions within Figure 4), and a processor which executes the process steps stored in the memory so as to extract foreground information from the stereo pair of images, and if the difference in location is above a set threshold the pixel information is identified as foreground pixel information, if below the set threshold the pixel information is determined to be background pixel information (see page 4, lines 4-10 of translated article);

Stenger et al does not particularly disclose, though, the followings:

(a) a DCT block classifier coupled to the foreground extractor which determines which DCT blocks of at least one of the images contain a threshold amount of foreground information; and an encoder coupled to the DCT block classifier which encodes the DCT blocks having the threshold amount of foreground information with a first level of quantization and which encodes the DCT blocks having less than the threshold amount of foreground information at a second lower quantization level, the encoder encodes the foreground pixel information at a first high level of quantization and which encodes background pixel information at a second lower level of quantization, wherein the encoding step encodes the entire 8 x 8 block of DCT coefficients at the first higher quantization level if the 8 x 8 block of DCT coefficients contains the predetermined amount of foreground pixel information as claimed in claims 1, 4, 7, 8, 11, 12, and 14-16; and

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(b) wherein the foreground pixel information is defined in terms of entire 8 x 8 blocks of DCT coefficients, wherein the encoding step encodes an entire 8 x 8 block of DCT coefficients as foreground information if at least a predetermined number of foreground pixels are within the 8 x 8 block, otherwise the entire 8 x 8 block of DCT coefficients is encoded as background information as claimed in claims 6 and 10.

Regarding (a) and (b), Katata et al discloses an image encoder as shown in Figure 1, and teaches the conventional use of a DCT block classifier (i.e., within 106 of Figure 1, and see column 5, lines 1-4) coupled to a foreground extractor (i.e., 101, 102 of Figure 1 and see column 4, line 45 to column 5, line 4) for determining which DCT blocks of at least one of the images contain a threshold amount of foreground information; an encoder (i.e, within 106 of Figure 1, and see column 5, lines 1-4) coupled to the DCT block classifier which encodes the DCT blocks having the threshold amount of foreground information with a first level of quantization and which encodes the DCT blocks having less than the threshold amount of foreground information at a second lower quantization level (see column 1, lines 12-25, columns 7-8), the encoder encodes the foreground pixel information at a first high level of quantization and which encodes background pixel information at a second lower level of quantization (see column 1, lines 12-25, columns 7-8), wherein the encoding step encodes the entire 8 x 8 block of DCT coefficients at the first higher quantization level if the 8 x 8 block of DCT coefficients contains the predetermined amount of foreground pixel information (see column 1, lines 12-58, columns 7-8); wherein the foreground pixel information is defined in terms of entire 8 x 8 blocks of DCT coefficients,

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wherein the encoding step encodes an entire 8 x 8 block of DCT coefficients as foreground information if at least a predetermined number of foreground pixels are within the 8 x 8 block, otherwise the entire 8 x 8 block of DCT coefficients is encoded as background information (see column 1, lines 12-58, columns 7-8). Therefore, it would have been obvious to one of ordinary skill in the art, having the Stenger and Katata et al references in front of him/her and the general knowledge of stereo image processings within videophone environments, would have had no difficulty in providing the DCT block classifier and an encoder for providing different quantization level processings for foreground and background image data as taught by Katata et al for the stereo image videophone system within Stenger for the same well known image compressions purposes as claimed.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Katata et al (5,878,515) discloses an image encoder and image decoder.

Okada (5,729,295; 6,064,436) disclose an image sequence encoding device and area extracting device.

Rosenberg discloses a ternary image templates for improved semantic compression.

Ueno et al discloses an image encoding apparatus.

Chen et al discloses a system and method for focused based image segmentation for video signals.

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7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-6306 (for informal or draft communications, please label


"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.


RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

3/9/01

